

Amendments

In the Claims

1. (Four times amended) An apparatus for guiding the movement of a surgical tool in relation to the anatomy of a patient, the apparatus comprising:

E1 display means disposed remote from the tool for indicating to a human the difference between [the] an actual and a desired [positions] position of the tool, the display means having a display reference frame; and

means for determining an actual position of the display means, wherein the difference is indicated with respect to the display reference frame.

Please cancel claim 2 without prejudice or disclaimer.

3. (Three times amended) An apparatus for use with an image guided surgical system which system includes a first display disposed remote from a surgical tool for indicating a position of the surgical tool in relation to an image of the anatomy of a patient, the apparatus comprising:

E2 a surgical tool having a tool reference frame;

means adapted for operative communication with the image guided surgery system and mounted to the tool for indicating to a human the difference between [the] an actual and a desired [positions] position of the tool, such that in operation, the difference between the actual and desired positions of the tool is displayed by the means for indicating and the position of the tool in relation to the image of the anatomy of the patient is shown on the first remotely disposed display; and

means for determining an actual position of the means for indicating.

6. (Thrice amended) An apparatus comprising:

a surgical tool having a tool reference frame;

means mounted to the tool for indicating to a human [the] a difference between [the] an actual and a desired [positions] position of the tool; and

means for determining an actual position of the means for indicating, wherein the tool includes proximal and [a] distal ends and the means for indicating comprises a plurality of selectively operable human visible indicators for indicating a direction in which the distal end should be translated to [each] reach the desired position, said plurality of position indicators disposed at angular intervals so as to surround a central point.

Please cancel claim 14 without prejudice or disclaimer.

15. (Twice amended) An apparatus for guiding the movement of a surgical tool in relation to the anatomy of a patient, the tool having a pointing axis, the apparatus comprising:

display means for indicating to a human [the] a difference between [the] an actual and a desired [positions] position of the tool; and

means for determining an actual position of the display means, wherein [the tool comprises a pointing axis and] the means for indicating comprises at least two indicators disposed in a plane substantially orthogonal to the pointing axis.

At claim 17, line 7, please delete "an" and insert therefor – a rotationally invariant –.

In claim 22, last line, please delete the first instance of "the" and insert therefor – a –.

24. (Twice amended) An apparatus for guiding the movement of a surgical tool with respect to the anatomy of a patient, the apparatus comprising:

a surgical tool;

means for defining a desired position of the tool based on an image of the anatomy;

means for determining [the] an actual position of the tool;

means for determining [the] a difference between the actual and desired positions;

E5
a display disposed remote from the surgical tool for indicating a position of the surgical tool in relation to an image of the anatomy of the patient;

at least one indicator mounted to the tool, the indicator providing [an] rotationally invariant indication of the difference between the actual and desired positions.

25. (Four times amended) An apparatus for use with an image guided surgical system which system includes an infrared localizer and a first display disposed remote from a surgical tool for indicating a position of the surgical tool in relation to an image of the anatomy of a patient, the apparatus comprising:

E6
a surgical tool;

a plurality of infrared emitters mounted to the tool for providing position signals to the infrared localizer; and

at least one human readable position indicator mounted to the tool for indicating a difference between an actual and a desired position of the tool, said tool adapted for use with the image guided surgery system such that, in operation, the position of the surgical tool in relation to the image of the anatomy is displayed on the first remotely disposed display and the difference between the actual and desired positions of the tool is indicated by the at least one indicator mounted to the tool.

In claim 26, line 7, please delete the first instance of "the" and insert therefor – an –.

Remarks

Claims 1-15, 17, 19-24, 26, and 31 stand rejected as indefinite under 35 U.S.C. 112, second paragraph. Claims 3-5, 17, 19-21, 23, 24, 25, 27-29, 30 and 35 stand rejected under 35 U.S.C. 103 as obvious over Manwaring in view of Yabe. The Examiner's indication that claims